

(Unclassified Paper)

NAVAL WAR COLLEGE
Newport, R. I.

THE FALKLANDS AIR WAR: LESSONS REVISITED

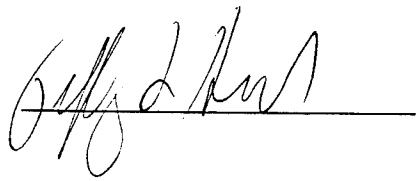
by

Jeffrey L. Huber

Lieutenant Commander, United States Navy

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Maritime Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: 

This document has been approved
for public release and sale; its
distribution is unlimited.

November, 1995

Paper directed by
M. N. Vego,
Professor, Department of Joint Maritime Operations

DTIC QUALITY INSPECTED 6

19950417 087

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION / AVAILABILITY OF REPORT DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.		
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			7a. NAME OF MONITORING ORGANIZATION		
6a. NAME OF PERFORMING ORGANIZATION OPERATIONS DEPARTMENT		6b. OFFICE SYMBOL (If applicable) C	7b. ADDRESS (City, State, and ZIP Code)		
6c. ADDRESS (City, State, and ZIP Code) NAVAL WAR COLLEGE NEWPORT, R.I. 02841		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER			
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	10. SOURCE OF FUNDING NUMBERS		
8c. ADDRESS (City, State, and ZIP Code)		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) THE FALKLANDS AIR WAR: LESSONS REVISITED (U)					
12. PERSONAL AUTHOR(S) LCDR JEFFRY L. HUBER, USN					
13a. TYPE OF REPORT FINAL		13b. TIME COVERED FROM TO		14. DATE OF REPORT (Year, Month, Day) 2/13/95	
15. PAGE COUNT 21					
16. SUPPLEMENTARY NOTATION A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations. The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	OPERATIONAL ART; AIR SUPERIORITY; THEATER GEOGRAPHY; AMPHIBIOUS ASSAULT		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) The Falklands conflict illustrates relevance of the tenets of operational art to the air superiority mission. This analysis will examine the physical, planning and decision making factors that led the belligerents to a pitched air power contest that continued until the last day of the conflict. Theater geography challenged the limits of both sides air forces. The British had structured their military to honor NATO commitments within the European sphere and contribute to stability in the Persian Gulf. Argentina had designed its air force with potential conflicts against South American neighbors in mind. The ad hoc application of forces to an operation for which they were not designed was the key element of the conflict. Inability of either side to establish early, decisive control of the air resulted in a war of attrition that proved costly to both.					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL CHAIRMAN, OPERATIONS DEPARTMENT			22b. TELEPHONE (Include Area Code) 841-3414		22c. OFFICE SYMBOL C

Abstract of

THE FALKLANDS AIR WAR: LESSONS REVISITED

The Falklands conflict illustrates the relevance of the tenets of operational art to the air superiority task. This analysis examines the physical, planning and decision making factors that led the belligerents to an air war of attrition that continued until the last day of the conflict.

Neither country had designed its air forces with a maritime struggle over the Falklands in mind. British jump carriers were developed and built as anti-submarine warfare platforms. The Argentine air forces were structured for potential conflicts with South American neighbors. Moreover, neither side had developed an operational or concept plan for fighting the 'nasty little war' in the South Atlantic.

Physical factors dictated a British counter air scheme that was predominantly defensive. Argentina's operational center of gravity (COG), its mainland based combat aircraft, was well outside the British operational reach. Britain's only option for defeating the hub of Argentine strength was to detect, intercept, and destroy aircraft as they attacked.

Rather than engage in a decisive air superiority fight with British Harriers, Argentina reserved its air power to counter the amphibious landing. This denied the British any opportunity to establish air superiority prior to commencing the ground war. As a result, British ground and surface forces were subjected to air attacks throughout the conflict.

Although they inflicted tremendous damage upon the British, the Argentines failed to strike successfully at Britain's most vulnerable centers of gravity, its carriers. Destroying the carriers would not only have granted Argentina near total air superiority, it would have reversed the outcome of the war.

A significant lesson of the air war over the Falklands is that sound operational planning is as vital to the air superiority task as it is to all aspects of warfare.

Dist	Avail and/or Special
A-1	

Codes

Preface

Most analysis and opinion written in the mid-1980s on the Falklands conflict falls into one of two categories. The first concentrates on the set of military and political strategic circumstances which led to the conflict. The second focuses on tactical strengths and shortcomings of particular systems and weapons which the Falkland's combat revealed.

This paper will address strategic, operational and tactical aspects of the Falklands air war, particularly the air superiority task. Though it will bring familiar issues to the surface, it is not aimed at re-hashing old arguments. Its purpose is to use the Falklands as a platform upon which to illustrate the relevance of operational art to air superiority.

Overview

The Falklands conflict, fought during the South Atlantic fall of 1982, is almost a decade and a half behind us. The British and Argentine struggle for air superiority has been all but erased from the public memory by the air superiority achievements of OPERATION DESERT STORM. The overwhelming defeat of Iraq's air force in a matter of days has completely captured the imagination of air power advocates.¹ Today, the fight for control and use of the air space over a handful of sparsely populated islands seems an insignificant contest between relatively low technology air forces.* Yet, analysis of the operational aspects of the Falklands air war yields lessons learned which are entirely pertinent today and will be for the foreseeable future.

¹Charles A. Horner, "The Air Campaign," *Military Review*, September 1991, p. 24

*Relative, that is, to 1995 technology. Argentine Exocet anti-surface missiles and British Sidewinder air-to-air and Sea Dart surface-to-air missiles were considered near state-of-the-art systems in 1982.

Theater geography challenged the limits of both sides' air forces.² The British had structured their military to honor NATO commitments within the European sphere and to contribute to stability in the Persian Gulf.³ Argentina had designed its air force, *Fuerza Aerea Argentina* (FAA), with potential conflicts against South American neighbors in mind.* More importantly, neither side had developed any contingency plan which forecast use of their existing forces to fight the 'nasty little war' that developed.⁴

Hence, a maritime theater air operation over the Falklands found both sides lacking sufficient means or methods of employment for the task at hand. For the British, lack of host nation accessibility excluded participation of Royal Air Force (RAF) fighters.⁵ They had not envisioned a situation in which responsibility for air superiority would rest solely upon the shoulders of their jump carriers. Argentine air power was neither structured nor trained for a long range, maritime confrontation.⁶ The *ad hoc* application of forces to an operation for which they were not designed was the key element

²Ian McGeoch, "The Falklands Operation; Problems, Considerations, Lessons," *NATO's Fifteen Nations*, June-July 1982, p. 26

³R. V. Jones, "The Falklands: An Unplanned Contingency in Air Defense," *Journal of Electronic Defense*, Volume 6, Number 6, June 1983, p. 60

*Actions involving the Argentine carrier *Vienticinco De Mayo* are not discussed here as the carrier did not play a major role in the conflict. Its one attempt to launch a raid on the British carrier group was foiled by a combination of propulsion plant problems and uncooperative winds. The *De Mayo* retired to port shortly thereafter and remained out of action for the duration as part of the Argentine 'fleet in being' concept. Its air wing of A-4 attack aircraft and other naval aircraft were absorbed by the air force and operated from mainland bases. References in the text to the Argentine Air Force (FAA) do not distinguish between it and air assets of the naval arm. Shore based Argentine naval aviation did, however, play a major role in the war effort.

⁴Headquarters United States Marine Corps, Memorandum for the Assistant Commandant and Chief of Staff, (Washington, D. C.: DON 1982), p.1; Leonard Wainstein, "Reflections on a Small War," Conflict: All Warfare Short of War, Volume 6, Number 2, 1985, p. 103

⁵John Nott, "The Falklands Campaign," Proceedings/Naval Review, 1983, p. 129

⁶Ruben O. Moro, The History of the South Atlantic Conflict: The War for the Malvinas, (New York, NY: Praeger Publishers, 1989), p. 100

of the conflict. The inability of either side to establish early, decisive control of the air resulted in a war of attrition which proved costly to both.

This analysis will examine the physical, planning and decision making factors that led the belligerents to a deadly air power contest which continued until the last day of the conflict.

Influence of geography and force structure

One of the most important aspects of the Falklands air war was the effect of geography on force employment.

The theater was a reasonably mature one from the Argentine perspective. Although air strips on the Falkland Islands were unsuitable for high performance combat aircraft, the FAA enjoyed an established infrastructure of adequate military air fields along their eastern coast located at Trelew, Comodoro Rivadavia, San Julian, Santa Cruz, Rio Gallegos and Rio Grande.⁷ This linear base of operations extended almost six hundred miles. Argentine numerical superiority in fixed-wing combat aircraft was approximately six to one.⁸

These factors were inherently advantageous. The long, exterior base of operations gave the Argentines multiple air lines of operation over which to converge upon the central British position (FIGURE 1). Larger numbers allowed them to absorb greater casualties than the British could afford to suffer.

But the base structure and distribution of aircraft were hardly perfect. The Argentines were able to deploy a small number of light attack and trainer aircraft to the islands.

⁷Ibid., p. 89

⁸Nott, p. 129. Reports and estimates of actual Argentine strength vary greatly. Argentine sources claim to have had as few as 86 operable combat aircraft at the beginning of hostilities. British and third party sources estimate the number as high as 145. The British began the operation with 28 Harriers on board its carriers. 14 additional Harriers flew (by way of intricate air refueling operations) or were transported to the theater during the course of the conflict.

These harassed the British, but were not decisive factors in the operation. Argentina's real striking power, consisting primarily of A-4 Skyhawks, Mirage IIIs and Super Entendards, was confined to mainland airfields.⁹ This gave the British much needed breathing room. Significant numbers of combat jets based on the Falklands would have profoundly changed the nature, and quite possibly the outcome, of the operation.¹⁰

THEATER GEOGRAPHY AND BASE STRUCTURE

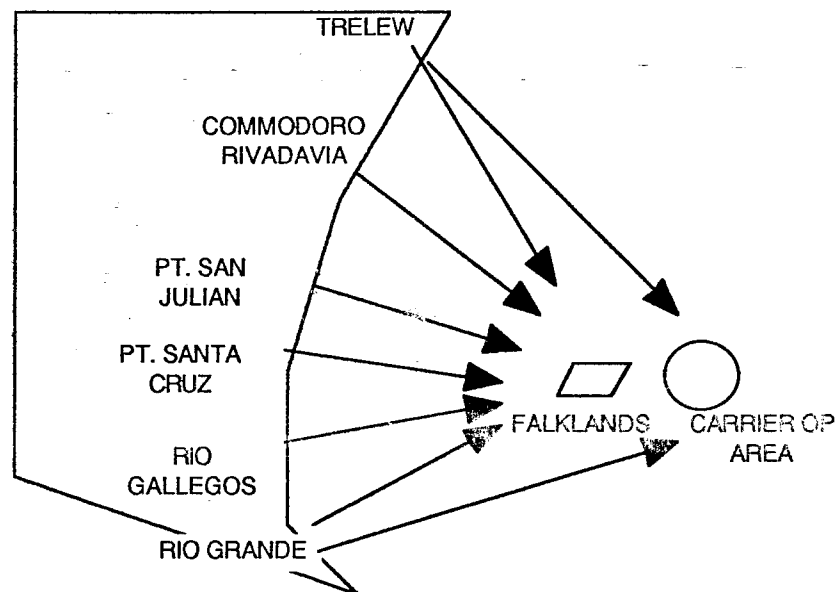


FIGURE 1

The distance between the Falklands and the continent adversely impacted Argentine air operations.¹¹ The 800 to 1,000 mile round trip to and from the islands put Argentine jets at the very edge of their fuel limits.¹² This made FAA operations largely reliant upon air-to-air refueling. Having only two tankers in its inventory created an operational sustainment

⁹Juan Carlos Murguizur, "The South Atlantic Conflict: an Argentinian Point of View," International Defense Review, Number 2, 1983 , p. 139

¹⁰Ibid.

¹¹Department of the Navy, Lessons of the Falklands, Summary Report, (February, 1983), p. 28

¹²Murguizur, p. 139

shortcoming which severely limited the potential for massed, simultaneous, multi-axis attacks.¹³

Even more critically, tanking was absolutely essential for reaching the British carriers. The carrier battle group was typically stationed one hundred or more miles east of the Falklands for operational security reasons (i.e., as far away from the threat as possible, yet close enough to project air power over the islands to protect British forces positioned there).

Hence, weaknesses in the Argentine force structure tempered the offensive potential of its numeric superiority and exterior, linear base of operations.

The immature nature of the theater from the British perspective dictated exclusive use of the carriers' (*HMS Hermes* and *HMS Invincible*) Harrier aircraft and surface-to-air capable escorts for the air superiority task. Their nearest available land air base was 3,500 miles to the northeast at Ascension Island.¹⁴ This distance made participation of RAF F-4 Phantom fighter aircraft impossible.¹⁵ Long range Vulcan bombers, launched from Ascension, flew strikes against the air field at Port Stanley. Their contribution, though, was limited and their effect minimal.¹⁶

British rules of engagement prohibited them from attacking the Argentine mainland.¹⁷ More practically, the combination of carrier stationing and short combat radius of the Harriers limited the operational reach of British air power to the vicinity of the contested islands.¹⁸ Both factors restricted British ability to conduct offensive counter air actions.

¹³Moro, p. 101

¹⁴Joseph F. Uдеми, "Modified to Meet the Need: British Aircraft in the Falklands," *Airpower*, Spring 1989, p. 63

¹⁵Sandy Woodward with Patrick Robinson, *One Hundred Days*, (Annapolis, Maryland: Naval Institute Press, 1992), p. 99

¹⁶Stewart W. B. Menaul, "The Falklands Campaign: A War of Yesterday?", *Strategic Review*, Fall, 1982, p. 89

¹⁷Ibid.

¹⁸National Defense University, *Falkland Islands Campaign: Understanding the Issues, Vol. I*, (Fort McNair, Washington, D.C., 1986), p. 215

Given its numerically inferior assets, the British carrier based central position was ideal for a defensive counter-air posture. However, the ninety-plus degree threat sector created by the Argentine base structure and air refueling capability severely constrained the depth of the British defensive shield. Carrier stationing and Harrier fuel considerations aside, spreading their air defense arsenal of surface-to-air-missile (SAM) ships and Harrier combat air patrols (CAPs) appreciably west of the islands would have left gaps in coverage. Moreover, an 'up threat' posture would have reduced the number of SAM and CAP assets able to mass against a raid on any given azimuth.

Lack of airborne early warning, considered by some to be the British 'Achilles' heel', confined defense-in-depth even further.¹⁹ Limited by the radar horizon, picket surface ships could not detect low flying attackers more than a dozen or so miles away. This restricted reaction time and significantly degraded the effectiveness of fighter direction. Late vectors produced short range intercepts at best and, in many cases, missed intercepts altogether. When this happened, the SAM destroyers became the first line of defense for the highly vulnerable British centers of gravity (COGs).*

Destroying one or both of the Argentine tanker aircraft would have proven most advantageous for the British. This would have made the carrier battle group, as long as it remained east of the Falklands, immune from mainland based air strikes. But the Argentine tanking stations were well beyond British detection and intercept capabilities. The British were unable to attack even Argentine targeting aircraft stationed less than two hundred miles from the battle group. These aircraft guided

¹⁹Udemi, p. 63

*From the operational point of view, British COGs changed with different phases of the war. The carriers, amphibious landing vessels, and forces on the ground were each, in turn, Britain's operational hub. Some assert that amphibious ships are not COGs, that they just carry the COG (ground forces and equipment) to the battlefield. This is a fine argument, but the distinction may be irrelevant. Whether we call amphibious ships 'COGs' or 'critical vulnerabilities of the COG', destroying them before they unload their cargo achieves the same objective.

sea skimming Exocet carrying aircraft toward the group's position.²⁰ Without them, FAA attackers could not have found their targets.

So, we see a frustrating pattern of potential advantages blunted by weaknesses and critical vulnerabilities which could not be exploited due to physical limitations. The influence of theater infrastructure and geography on the composition of both forces limited each side's ability to gain decisive leverage over the other.

The British air superiority task

A trap in analyzing an air superiority operation is that we can come to consider control of the sky an end in itself. This is never the case. Air superiority is always a supporting objective in an overall operational design. Its relevance cannot be entirely divorced from the context of the whole military mission. U.S. Joint Chiefs of Staff doctrine defines air superiority as:

"That degree of dominance in the air battle of one force over another which permits the conduct of operations by the former and its related land, sea and air forces at a given time and place without prohibitive interference by the opposing force."²¹

Air superiority, then, provides operational protection of friendly forces from enemy air power. Any measure of its effectiveness reflects the degree to which own force freedom of action to achieve other objectives is or is not hindered by enemy air forces. Therefore, while the focus of this analysis is the air superiority aspect of the Falklands conflict, we

²⁰Julian S. Lake, "The South Atlantic War: A Review of Lessons Learned," Defense Electronics, November 1983, pp. 91-94

²¹Office of the Chairman, the Joint Chiefs of Staff, Department of Defense Dictionary of Military and Associated Terms, (Washington, D. C.: U.S. Government Printing Office, 23 March 1994), p. 20

cannot completely ignore its place in the overall operational scheme.

Britain's ultimate military goal was the removal and/or withdrawal of Argentine ground forces from the Falkland Islands.* The British had originally hoped to force a withdrawal by means of a naval and air blockade. By late April of '82, it was obvious the blockade was not going to produce the desired result. An amphibious assault would be necessary to defeat occupying forces by way of a ground battle.²²

Anticipating the pending landing, (then) Rear Admiral Sandy Woodward, On-Scene Commander of British naval forces, noted:

"We could not...put forces ashore anywhere on the islands without air superiority. This does not mean providing total immunity from enemy air attack, only that the land forces be given reasonable effective air cover, sufficient to ensure that their operations on the ground are not seriously hampered. *Opinion on what constitutes 'sufficient' differs sharply depending on your situation (emphasis added).*

Admiral Woodward further pointed out that the Royal Marine being attacked by a single aircraft would most likely view 'air superiority' in a different light than would the Anti-Air Warfare Commander who was desperately trying to meet an overwhelming demand for CAP with too few aircraft.²³

Although Admiral Woodward was a submariner by trade, his reflections on the 'relative-to-your-point-of-view' meaning of 'air superiority' were by no means naive or inaccurate. A definitive answer to the debate among air, ground and surface commanders of just what constitutes 'sufficient air superiority' has yet to be established. Woodward's guideline of, "...reasonable effective air cover, sufficient to ensure...operations on the ground are *not seriously hampered,*"

*The British operation included liberating South Georgia as well as the Falkland Islands. However, the Falklands were the operational and air war primary sector of effort. South Georgia was far beyond the reach of Argentine air power.

²²Wainstein, p. 101

²³Ibid.

sounds remarkably similar to today's JCS definition, "...degree of dominance in the air battle...which permits the conduct of operations without...prohibitive interference..."

Yet, Woodward's comments highlight two critically important aspects of Britain's operational scheme. First, that they had established air superiority as a 'go no-go' requirement for commencing the amphibious landing. They had to achieve the objectives of the air superiority phase before they commenced the ground phase. Second, that their air superiority objectives were vague. They had no defined measure of effectiveness by which to judge whether or not the degree of air superiority would be 'sufficient' to move on to the ground war.

A third critical aspect not addressed by Admiral Woodward concerns the extent to which the British could realistically have expected to achieve any stated air superiority objective. Their limited reach constrained the types of air superiority actions they could conduct. Hence, an ends-means disconnect produced an inherently flawed operational design.

Offense versus defense

The U.S. Air Force's Aerospace Doctrine recognizes two components of air superiority: the offensive and the defensive.

"Offensive operations seek out and neutralize or destroy enemy aerospace forces and ground-based defenses at a time and place of our choosing. Defensive operations detect, identify, intercept, and destroy enemy (air) forces attempting to attack friendly forces or to penetrate the (air) environment above friendly surface forces." ²⁴

These definitions aptly describe the nature of each belligerent's conduct of the air war. Admittedly, black and white distinctions seldom exist in the real world. Each side conducted both types of operations. From an overall

²⁴United States Air Force, Basic Aerospace Doctrine of the United States, Air Force Manual 1-1, Volume 1, March 1992, p. 6

perspective, however, the Argentines carried the offensive. The British were predominantly defensive.

Royal forces were reasonably successful at neutralizing (by destroying or capturing) Argentine air assets on the islands through a series of offensive fires (air strike, naval gun fire and special forces raids).²⁵ Unfortunately for them, this did nothing to affect the FAA's center of gravity, the mainland based aircraft.*

Unable to attack the mainland, the British realized they could only achieve air superiority by luring the FAA into their air defense net. This was a primary objective of the 1 May air and naval gunfire attacks on Port Stanley and Goose Green.²⁶ Woodward's goal was to deceive the Argentines into thinking a direct amphibious assault on Port Stanley was imminent. If this successfully drew out the FAA, he hoped to inflict enough attrition (again, what MOE would constitute 'enough'?) to force it to retire permanently from the conflict.²⁷

The Argentines did react, launching over forty sorties against the British that day. Harriers engaged several Argentine fighters and shot down three of them. This brought an unintended result. Argentine fighters would never again attempt to engage in air-to-air combat.²⁸ The first day's action demonstrated that they could not expect to win a frontal air-to-air fight against the Harriers. Therefore, they refused to compete.²⁹

²⁵Derek Wood and Mark Hewish, "The Falklands Conflict Part 1: The Air War," International Defense Review, Number 8, 1982, p. 980

*This leads to another 'COG' discussion. We can safely say that Argentina's strategic COG was its leadership. Tactically, its COGs varied according to what posed the primary threat to British forces in any given engagement. Operationally, Argentina's air power was its COG for most of the conflict. At some point during the ground war, as the FAA became less and less able to contribute to the operation's outcome, ground forces became Argentina's COG. If we focus strictly on the air war, however, we can fairly say that the mainland based jet combat aircraft were the hub of Argentina's air strength.

²⁶Woodward, et al, pp 132, 133. Vulcan bombers based at Ascension participated in this action.

²⁷Ibid.

²⁸Ibid., pp 140, 142-143

²⁹National Defense University, p. 101

From 1 May on, FAA combat missions observed by the British consisted of air-to-ground or war-at-sea strikes. This put the Argentines firmly on the offensive, as they now dictated the objectives as well as the time and place of air engagement.

Further, realizing the landing was not, in fact, taking place, the Argentines held back their air force to oppose the amphibious assault when it actually came.³⁰ Except for the Exocet strike which destroyed *HMS Sheffield*,* the FAA did not commit to a determined attack against the British until landing forces were ashore.³¹ These actions and decisions set the stage for the attrition style air warfare which subsequently developed.

The British air superiority task now became purely defensive. Detecting, intercepting and destroying Argentine aircraft as they attacked land and surface targets was the only counter air option available to them. They had no way of controlling their enemy's actions.

This placed the British in a bind. Having committed to an amphibious assault, they faced two time constraints. They had to resolve the conflict before the onset of the South Atlantic

³⁰Ibid., pp 114, 115. Argentine and British writers offer interestingly different versions of this turn of events. The British believe that the Argentines purposely held back their air resources to oppose the real landing when it came. They assume the Argentines realized the 1 May actions were just a bluff. The Argentines, however, seem to believe that they repulsed an actual invasion attempt on 1 May. Dr. J. C. Murguizur, a lecturer at the Argentine Army Staff College, states that Argentine forces repulsed three attempted invasions prior to the San Carlos landing. How he arrived at this conclusion is uncertain. One explanation may be that Argentines mistook naval gunfire strikes and special forces insertions for major amphibious invasions.

* The *Sheffield* incident is another example of conflicting stories. British sources claim the attack was conducted purely in reprisal for the sinking of *ANS Belgrano*, alleging that the Argentines just wanted to hit something, anything, in return. Argentines state that the air strike was launched in direct response to a radar contact at the Port Stanley sight which operators interpreted to be *Hermes*. Hence, they contend that the attack's objective was to destroy the British COG, not to seek simple revenge.

³¹Woodward, et al, p. 251

winter and before the limit of the fleet's sustainability was reached.³²

By 7 May, when the amphibious group sailed from Ascension Island, it was obvious to everyone on the British side that no sufficient degree of air superiority could be achieved prior to the landing.³³ The plan to establish air superiority on time could not succeed because the enemy simply refused to cooperate.

Hence, circumstances forced the British to violate their own planned sequence of events. The ground phase would have to begin with the air phase still undecided.

The air war of attrition

Just as the air war was not purely offensive or defensive for either side, its overall attrition characteristic did not preclude use of maneuver style warfare. Argentina's low flyer attack tactics, for example, exploited Britain's surveillance weakness, the lack of Airborne Early Warning.

Similarly, the cover-of-darkness landing at San Carlos Bay on 21 May was by far Britain's most ingenious use of maneuver in the conflict.³⁴ From an air war perspective, this was the only way to adequately protect the amphibious force from the FAA during the critical movement ashore.

The bay's surrounding terrain limited Argentine air attack avenues of approach.³⁵ The British could, therefore, efficiently concentrate SAM and CAP in positions to block these attack lanes. It was unlikely, though, that even with these terrain advantages, SAM ships and CAP could defend sufficiently against air raids during the acutely dangerous stage of the landing.

The ability to conduct the landing at night proved to be a critical strength for the British. FAA pilots and aircraft were

³²Ibid., pp 78, 82

³³Julian Thompson, The Lifeblood of War: Logistics in Armed Conflict, (London: Brassey's UK), p. 268

³⁴Lake, p. 92

³⁵Moro, p. 189

day capable only.³⁶ This granted the British air superiority, by default, at night. Thus, by applying an own force strength against an enemy's weakness, the British overcame their air superiority shortcoming long enough to commence the ground war. The landing was accomplished without incident.³⁷

The return of daylight on the twenty first, however, brought a ferocious response from the Argentine Air Force. This was the point at which the costly contest of attrition began.³⁸ The FAA executed a series of attacks throughout the day on ships in the Amphibious Operating Area (AOA). Only two of seven British warships in the sound escaped damage. Argentina lost an estimated fourteen aircraft.³⁹

Despite the high casualties returned by the British, they would feel the FAA's presence for the remainder of the conflict. Over the days following the landing, Argentine air continued to damage British ships at an alarming rate. FAA strikes cut British ground lines of communication at critical points as royal ground forces broke out from the beach head and proceeded toward Port Stanley. Loss of the transport helicopters on *Atlantic Conveyor* had devastating effects on British ground mobility and logistics. FAA attacks on land lines of supply at Goose Green literally caused British troops to run out of ammunition in the critical stage of a fire-fight. Damage and casualties inflicted on British amphibious ships at Bluff Cove were disastrous.⁴⁰

As both sides felt the effects of attrition, the air war's intensity diminished, but it never completely ended. By the last few days of the conflict, having faced a 'forest' of CAP and SAMs, the FAA was near the end of its resources.⁴¹ It no longer had any chance of tipping the balance in Argentina's

³⁶Ibid, p. 116

³⁷National Defense University, p. 206

³⁸Woodward, et al, p. 270

³⁹Ibid., p. 269

⁴⁰Lake, p. 92; National Defense University, p. 206; Thompson, pp 277-279; Moro, p. 299

⁴¹Murguizur, p. 137

favor.⁴² Still, it did not quit. It mounted attacks on British ground forces as late as 13 June, the last day of hostilities.⁴³ That same day, an Argentine cargo plane flew into Port Stanley with a full supply of ammunition for the garrison troops.⁴⁴ Even after the announcement of the Argentine ground force commander's surrender, Admiral Woodward was reluctant to steam *Hermes* into port to begin prisoner-of-war evacuation. Until the Argentine government made the surrender official, its air force was still capable of attacking and sinking his main carrier.⁴⁵

The price of victory

A perfectly reasonable Argentine argument states that, "Except in localized areas, or for short periods of time, neither opponent was really able to establish air superiority over the other."⁴⁶ The FAA can certainly be credited with having 'effectively hampered' British freedom of action up to the last day of the war. An opposing and equally reasonable viewpoint is that the British established a sufficient degree of air superiority to allow its forces to achieve the conclusive operational goal.

Pragmatically speaking, the question of, "Did or did not the British achieve air superiority?" may be moot. However close the air contest may have been, they won the war. The price of victory, however, was exorbitant.

The punishment absorbed by both sides is certainly in sharp contrast with our post DESERT STORM notions of acceptability. The FAA sank or damaged sixteen ships. At least five other British vessels escaped damage only through the luck of faulty bomb fusing.⁴⁷ The British captured or destroyed approximately

⁴²Ibid.

⁴³Ibid., pp 312, 313

⁴⁴Ibid., pp 314, 315

⁴⁵Woodward, et al, p. 335

⁴⁶Moro, p. 115

⁴⁷Rodney A. Burden and others, Falklands, the Air War, (London: Arms and Armor Press, 1986), pp. 428-35; Woodward, et al, p. xviii.

110 aircraft, an estimated 50% to 90% of Argentina's pre-hostilities operable air arsenal.⁴⁸

Plans and decisions

We have discussed constraints imposed on each side by geography and force structure. These were, indeed, crucial factors which contributed to the attritive nature of the conflict. System maintenance and weather also came into play. But to fully analyze this operation, we must look to both belligerents' planning and decision making processes.

The most perplexing aspect of the Falklands air war is the search to find a logical pattern in the FAA's actions. Refusing to fight the Harriers 'toe-to-toe' made a certain amount of sense. British air-to-air missiles outclassed those in the Argentine inventory.⁴⁹ Why waste airplanes and pilots attempting to shoot down Harriers one at a time when they could neutralize most or all of them by hitting a carrier? Had they hit the largest of the two carriers, *Hermes*, the British, by their own admission, would have been finished. Even a success against the smaller *Invincible* would have severely jeopardized the British operation.⁵⁰

Yet, if the Argentines realized striking the carriers was the most effective way to achieve air superiority, why did they only make five tries at them?⁵¹ Was it their scarcity of stand-off Exocet missiles?⁵² If so, why not press the attack with gravity bombs? They were certainly willing to take heavy losses conducting iron-bomb attacks on the SAM ships at San Carlos.

⁴⁸Wood, et al, p. 980. Percentage range based upon multiple reports and estimates of Argentine Air arsenal at the beginning of hostilities.

⁴⁹Woodward, et al, p. 139. Argentine fighters were armed with Matra Magic 530 missiles, a rear quarter only weapon. British AIM 9L Sidewinders had longer range and forward aspect capabilities.

⁵⁰Woodward, et al, p. 99

⁵¹Lake, pp 91-94. Two attempts to launch Exocet missions apparently aborted. If we count the attempted De Mayo strike, the Argentines made a total of six attempts on the carrier.

⁵²Ibid., p. 223. Argentina only had about five air launch versions of Exocet in its arsenal.

Why would they hesitate to go after the carriers in the same manner?

The strike on the amphibious ships (*HMS Sir Tristram* and *HMS Sir Gallahad*) at Bluff Cove on 10 June was extremely effective.⁵³ Loss of the troops and equipment aboard them was profoundly more damaging to the British operation than loss of any SAM ships would have been. Weeks earlier, had FAA strikers sunk several of the amphibious ships in the AOA the day of the San Carlos landing, the British situation ashore would have been a catastrophe.⁵⁴ Yet, that day, strikers concentrated on the warships. Not one logistic ship or troop carrier was hit.⁵⁵ Was there a shift in the FAA's priorities between the time of the San Carlos landing and the Bluff Cove incident? Or should we attribute the seemingly contradictory choice of targets to the 'fog of war'? Perhaps the attacks on the SAM ships at San Carlos indicate that the FAA was still trying to achieve some measure of air superiority. Yet, this line of reasoning brings the riddle full circle. If they were still trying to achieve air superiority, why didn't they make the carriers their top priority?

Realistically, we cannot expect to directly correlate every tactical action of the FAA to a planning sequel or decision devised at the operational level. Yet, we can't help but wonder at the Argentine's apparent lack of a persistent thread of overall design in their air operation.

Doctor Juan Carlos Murguizir, a lecturer in military history at the Argentine Army Staff College, offers frank, critical insights to this puzzle:

"The armed forces were divided into watertight compartments, each service jealously guarding its rights and privileges. Their compulsory participation in the to and fro of national politics...aggravated the situation."

⁵³Ibid., p. 321

⁵⁴Thompson, p. 271

⁵⁵Ibid.

"The coordination Staff was responsible in theory for drawing up plans for joint-service operations, but in practice did very little. In military circles, this organization was referred to as 'the pantheon' since it served as an elegant burial-place for senior officers too old for a command posting but not yet old enough to be retired."

"There did not seem to be any clear grasp as to the real aim of the occupation. What planning there was (was) therefore limited in scope, inappropriate or even self-contradictory."⁵⁶

These insider's views illuminate four critical Argentine strategic failings:

- Lack of unity of command/effort.
- Lack of clear distinction and priority between political and military aims.
- Lack of a competent joint planning staff.
- Lack of clear, realistic objectives.

Argentina's flawed strategy spawned an inadequate operational scheme. The reason, then, that we can't see a coherent thread in the Argentine air operation is that there wasn't one. This probably cost Argentina the war.

The British, on the other hand, developed a crisis operational plan, but it was not a feasible one. Achieving air superiority prior to conducting an amphibious assault was an excellent objective. Yet, without the ability to conduct offensive counter air operations against the heart of the Argentine air force, their defensive scheme was wholly dependent upon their adversary's cooperation. Even if the Argentines had acted according to their wishes, the British had not determined a measure of air superiority effectiveness which would allow suitable conditions for beginning the ground war. Further, vulnerability of the carriers and the limited means of

⁵⁶Murguizur, pp 135-138. Exact quotes are used to avoid diluting or distorting Dr. Murguizur's observations.

protecting them posed the risk of operational defeat before the ground war could begin. Finally, when they realized no suitable degree of air superiority could be achieved on time, the British discarded their own 'go no-go' criterion and proceeded with the ground war.

Admittedly, circumstances placed the British in a very bad position. They could continue the war without air superiority, or they could give up. The latter was not really an acceptable option.

The night landing at San Carlos temporarily compensated for Britain's air superiority inadequacy. However, given the FAA's determination to keep fighting, the attrition warfare that followed was inevitable.

Conclusion

By invading the Falklands, Argentina triggered a war without having forged a plan to win it. The British decision to respond militarily was, as are all such determinations, a political one. They sailed to war even though most military experts in the United States and Britain considered the mission unsuitable and infeasible.

Achieving air superiority was a crucial step toward meeting both sides' operational and strategic aims. Yet, each sides' air superiority plan was flawed. Both air forces were inadequate to effectively execute the assignment given the geographic challenges of the theater. Geography, force structure and planning inadequacies combined to restrict the effectiveness of both sides' offensive and defensive counter air operations. Though Britain won the war, it could easily have lost it in an afternoon. One Argentine aircraft placing one bomb in *Herme's* hangar bay could have reversed the outcome.

A major lesson of the 'nasty little war' over the Falklands is that the operational art process of prudent ends, ways, means and risk considerations is as applicable and vital to air warfare as it is to all military operations.

Operational lessons learned

The United States will (hopefully) never allow itself to be trapped in a Falklands type scenario. Still, we cannot always expect to have the situational advantages we enjoyed in the Gulf War. Lessons learned from the Falklands experience which will apply to any air superiority mission to which we may commit include:

- Sound operational plans are essential to achieving air superiority.
- Offensive air operational objectives must directly or indirectly attack the enemy air power's center of gravity in the most effective manner possible.
- Purely or predominantly defensive air superiority schemes are only suitable when facing opponents possessing significantly weaker air power compared to own force. Vulnerability of own force center(s) of gravity must be considered in the relativity equation.
- Suitable measures of effectiveness of air superiority must be carefully designed and clearly promulgated. All aspects of the overall operational plan must be fully examined and considered when determining these measures.
- Achievement of air superiority objectives as planned in sequential operations is indispensable. Allowing time constraints to violate this principle adds significant risk to military missions.
- Theater geography is a critical factor of air superiority missions. Careful consideration of geography must be applied when designing air plans of operation.
- Rules of engagement must be carefully tailored to allow achievement of offensive air superiority objectives.

As the Falklands war illustrated, the air superiority task is much more than a simple line item in a Campaign Plan.

BIBLIOGRAPHY

REFERENCED SOURCES:

- Burden, Rodney A. and others. Falklands, the Air War. London: Arms and Armor Press. 1986.
- Department of the Navy. Lessons of the Falklands, Summary Report. Washington D.C. February 1983.
- Headquarters United States Marine Corps. Memorandum for the Assistant Commandant and Chief of Staff. Washington, D.C.: Department of the Navy. 1982.
- Horner, Charles A. "The Air Campaign." Military Review. September 1991.
- Jones, R. V. "The Falklands: An Unplanned Contingency in Air Defense." Journal of Electronic Defense. Volume 6, Number 6, June 1983.
- Lake, Julian S. "The South Atlantic War: A Review of Lessons Learned." Defense Electronics. November 1983.
- Mcgeoch, Ian. "The Falklands Operation; Problems, Considerations, Lessons." NATO's Fifteen Nations. June-July 1982.
- Menaul, Stewart W. B. "The Falklands Campaign: A War of Yesterday?" Strategic Review. Fall 1982.
- Moro, Ruben O. The History of the South Atlantic Conflict. The War for the Malvinas. New York: Praeger Publishers. 1989.
- Murguizur, Juan Carlos. "The South Atlantic Conflict: an Argentinean Point of View." International Defense Review. Number 2 1983.
- National Defense University. Falkland Islands Campaign: Understanding the Issues, Vol. I. Fort McNair, Washington D.C. 1986.
- Nott, John. "The Falklands Campaign." Proceedings/Naval Review. 1983.
- Office of the Chairman, the Joint Chiefs of Staff. Department of Defense Dictionary of Military and Associated Terms: JCS Publication 1-02. Washington, D. C.: U.S. Government Printing Office. 23 March 1994.
- Thompson, Julian. The Lifeblood of War: Logistics in Armed Conflict. London: Brassey's UK.

Udemi, Joseph F. "Modified to Meet the Need: British Aircraft in the Falklands." Airpower. Spring 1989.

United States Air Force. Basic Aerospace Doctrine of the United States: Air Force Manual 1-1, Volume 1. March 1992.

Wainstein, Leonard. "Reflections on a Small War." Conflict: All Warfare Short of War. Volume 6, Number 2 1985.

Wood, Derek and Mark Hewish. "The Falklands Conflict Part 1: The Air War". International Defense Review. Number 8 1982.

Woodward, Sandy with Patrick Robinson. One Hundred Days. Annapolis Maryland: Naval Institute Press. 1992.

BACKGROUND SOURCES:

Cordesman, Anthony H. "The Falklands Crisis: Emerging Lessons for Power Projection and Force Planning." Armed Forces Journal International. September 1982.

Lippman, David H., "The Falklands War: Grace Under Pressure." Marine Corps Gazette. July 1985.

Moorer, Thomas and Alvin J. Cottrell. "In the Wake of the Falklands Battle." Strategic Review. Summer 1982.

Murphy, Timothy G. "A Critique of the Air Campaign." Airpower Journal, Spring 1994.

Office of the Chief of Naval Operations and Headquarters United States Marine Corps. Naval Doctrine Publication 1: Naval Warfare. Washington D. C.: Department of the Navy. 28 March 1994.